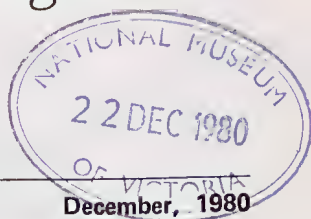


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## A NEW SPECIES OF *MYIANOETUS* OUDEMANS (ACARINA: ANOETIDAE) FROM A CERATOPOGONID FLY IN AUSTRALASIA

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### Abstract

*Myianoetus dycei* sp. n. is figured and described from hypopi phoretic on *Culicoides brevitarsis* Kieffer in northern Australia and Fiji. New subjective synonymy: *Anoetostoma* Womersley, 1941 = *Myianoetus* Oudemans, 1929.

### Introduction

The introduced biting midge *Culicoides brevitarsis* Kieffer is well established as a vector of arboviruses in Australia (Doherty, 1972; Doherty *et al.*, 1972), and we now describe a hypopial mite commonly found phoretic on it. It belongs in *Myianoetus* Oudemans, a genus of ca 30 species mostly known only as hypopi phoretic on higher flies, especially *Cyclorhapha*. However, the new record (the first from the lower ceratopogonids, *Nematocera*) is not surprising, since *C. brevitarsis* breeds in dung (Cannon and Reye, 1966), as do many *Cyclorhapha*. It is undoubtedly in this biotope that the flies pick up their hypopi.

### Genus *Myianoetus* Oudemans

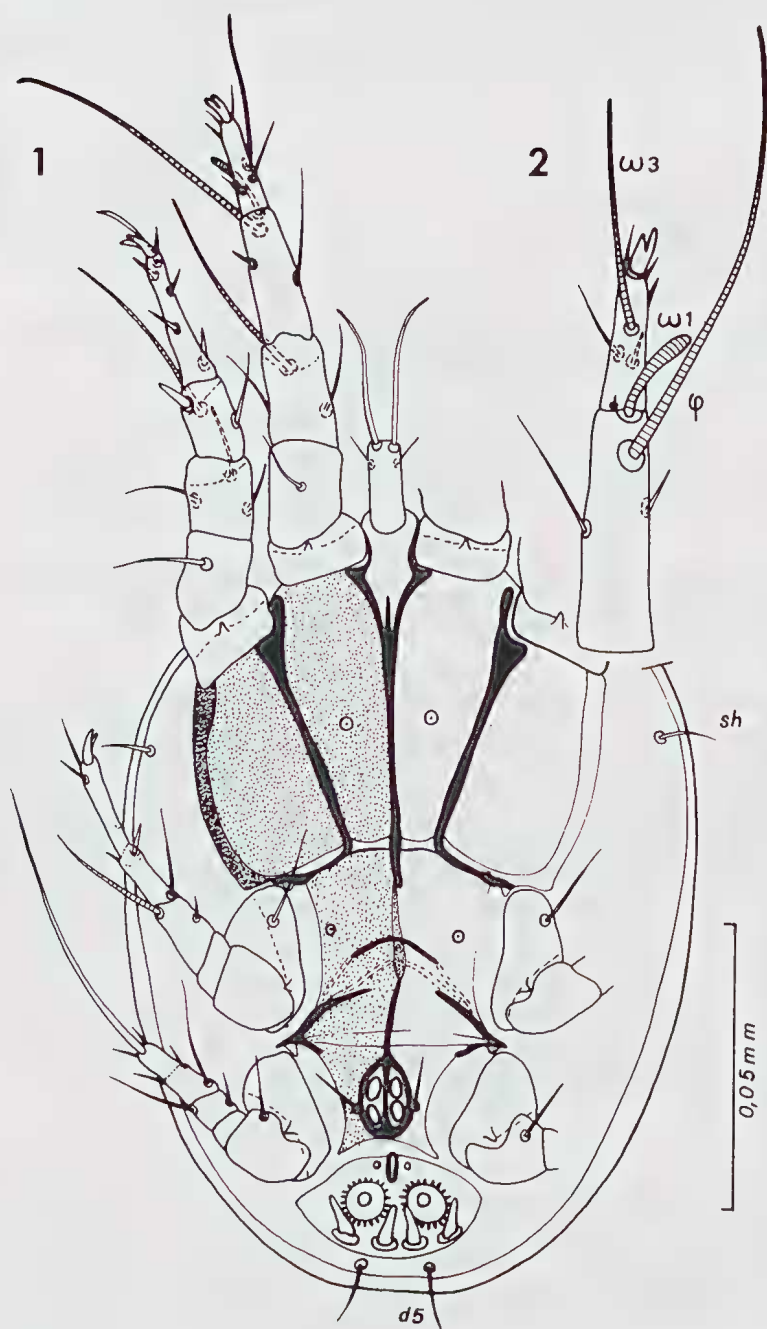
*Myianoetus* Oudemans, 1929, *Ent. Ber., Amst.* 7: 449. Type-species *Acarus muscarum* Linnaeus.

*Anoetostoma* Womersley, 1941, *Rec. S. Aust. Mus.* 6: 485. Type-species *Anoetostoma oudemansi* Womersley (*sic*). Syn. n.

### *Myianoetus dycei* sp. n.

(Figs 1-3)

*Material examined.* All hypopi, phoretic on *C. brevitarsis*, mostly on abdomen, as follows:— QUEENSLAND: Rockhampton, 20.ii.1968, A. L. Dyce (holotype and four paratypes); Parkhurst, 24.ii.1968, A.L.D. (nine paratypes); Kowanyama (formerly Mitchell River Mission), iv.1969, A.L.D. (five paratypes); Kowanyama, 1969, H.A. Standfast and E.T. Bulfin (five paratypes). NORTHERN TERRITORY:



Figs 1,2. *Myianoetus dycei*: (1) hypopus in ventral view; (2) tibia-tarsus I in dorsal view.

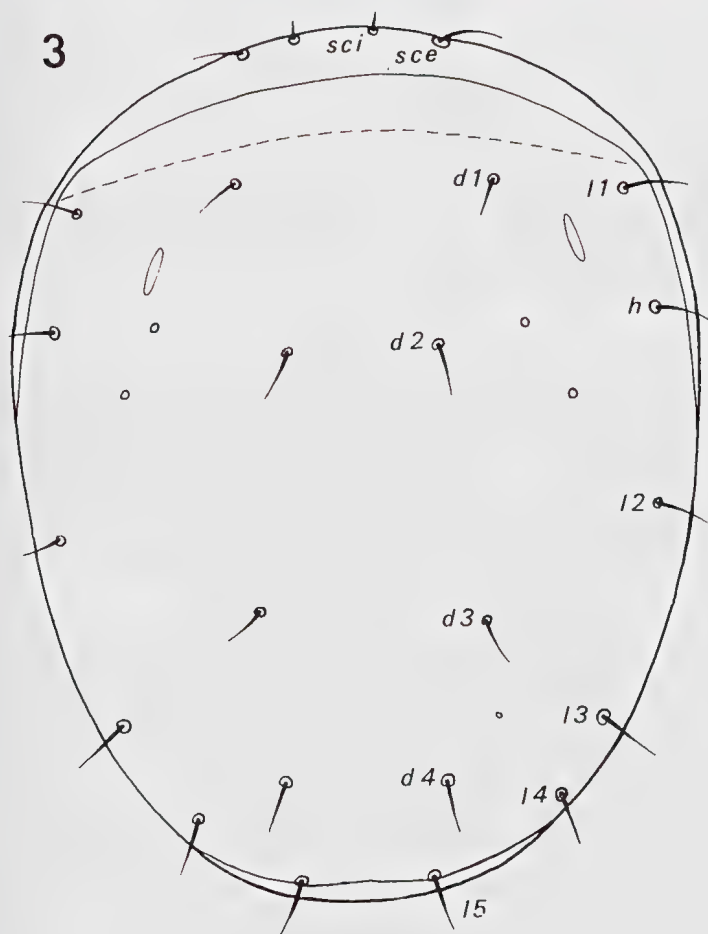


Fig. 3. *Myianoetus dycei*: idiosoma of hypopus in dorsal view.

Beatrice Hill, 25.i.1979, A.L.D. (11 paratypes); Berrimah Experiment Farm (10 miles = 16 km S of Darwin), 27-28.ii.1968, J. Haslam (five paratypes). FIJI: Viti Levu, 17.viii.1967, G. F. Bornemissza (four paratypes). Holotype in Australian National Insect Collection, CSIRO, Canberra; paratypes in authors' collections.

#### *Hypopus*

Holotype 141  $\mu$ m long, 108  $\mu$ m wide (four paratypes 135 x 110, 150 x 126, 156 x 130, 160 x 134). *Dorsum*: Propodonotum 15  $\mu$ m deep, with two pairs of setae (*sci* very short, *sce* longer). Hysteronotal setae short and thin. *Venter*: Sternum long, extended posteriorly into weakly sclerotised pregenital sclerite. Coxae II completely closed, connected to sternum by narrow transverse strip. Setae *cx*<sub>1</sub>

and  $cx_{III}$  represented only by their alveoli. Epimera IV not reaching midline. Suctorial plate rather small, with larger (posterior) pair of suckers  $7.5-8\ \mu\text{m}$  in diameter, with denticulate rims; with two pairs of elongate conoids posteriorly set in curved line. *Palposoma*  $15\ \mu\text{m}$  long, with pair of elongate solenidia ( $25\ \mu\text{m}$ ) apically. *Legs*: Tarsi I-IV 15, 24, 24,  $14\ \mu\text{m}$  long, respectively. Tibia I  $26-27\ \mu\text{m}$  long. Ratio of lengths of tarsus I: tibia I 1: 1.8. Tarsi I-III with bifid claw apically, IV with strong seta ( $45\ \mu\text{m}$ ). Solenidia on genua I-IV long. Solenidion  $\omega_1$  set dorsoapically on tibia I, just beyond solenidion  $\phi$ ; solenidion  $\omega_2$  probably represented by small seta set dorsobasally on tarsus I; solenidion  $\omega_3$  set middorsally on tarsus I.

### Notes

It may now be said that *Anoetostoma* Womersley, based on hypopi of *A. oudemansi* Womersley from the house fly, *Musca domestica* L. (Muscidae) in New South Wales, is a synonym of *Myianoetus* Oudemans\* since both show bifid claws on the legs (not mentioned in Womersley's text, but clear in his drawings), and a suctorial plate with one (posterior) pair of suckers enlarged and two pairs of conoids. The lattermost are not suckers as thought by Womersley, but soft conic projections probably serving as buffers to facilitate detachment from the host (Fain, 1973; 1974).

*M. dycei* is distinct from *M. oudemansi* in showing tarsus I shorter, rather than much longer, than tibia I (ratio of lengths 1 : 1.8 vs 1 : 0.5). In other species whose hypopi are known, tarsus I may range from longer to a little shorter than tibia I, but the ratio never exceeds 1 : 1.3 in the latter case. Other points seen only in *M. dycei* are the denticulate (posterior) suckers and the relatively elongate conoids on the suctorial plate.

The new species is named for Mr A. L. Dyce, McMaster Laboratory, CSIRO, Glebe, who collected many of the specimens and kindly read our draft manuscript.

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\* *Anoetostoma domrowi* Fain, 1968, based on hypopi from *Scoliophthalmus* sp. (Chloropidae) in New Guinea, is not a *Myianoetus* as here understood, and should be removed to another genus, possibly *Anoetus* Dujardin itself, to which it seems close.